



Massachusetts Department of Environmental Protection  
Bureau of Waste Prevention – Air Quality

Transmittal Number \_\_\_\_\_

**LPA-FUEL (BWP AQ 01)**

**Limited Plan Application for Fuel Utilization Emission Unit(s)**

Facility ID (if known) \_\_\_\_\_

Use this form for the following units not subject to the Environmental Results Program (ERP) for boilers (found at 310 CMR 7.26(30)-(37) inclusive):

- Boilers firing Natural Gas and having a heat input capacity of at least 10,000,000 British Thermal Units per hour (Btu/hr) but less than 40,000,000 Btu/hr.
- Boilers firing Ultra Low Sulfur Distillate Fuel Oil and having a heat input capacity of at least 10,000,000 Btu/hr but less than 30,000,000 Btu/hr.

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



**A. Facility Information**

1. Facility Name \_\_\_\_\_

2. Street Address \_\_\_\_\_

3. City \_\_\_\_\_

MA

4. State \_\_\_\_\_

5. ZIP Code \_\_\_\_\_

6. Standard Industrial Classification (SIC) Code \_\_\_\_\_

7. North American Industry Classification System (NAICS) Code \_\_\_\_\_

8. List ALL existing Air Quality Plan Approvals, Emission Cap Notifications, and 310 CMR 7.26 Compliance Certifications and associated facility-wide emission caps, if any, for this facility in the table below. If you hold a Final Operating Permit for this facility, you may leave this table blank.

Table 1			
Approval Number(s)/ 25% or 50% Rule/ 310 CMR 7.26 Certification	Transmittal Number(s) (if Applicable)	Air Contaminant (e.g. CO, CO <sub>2</sub> , NO <sub>x</sub> , SO <sub>2</sub> , VOC, HAP, PM or Other)*	Existing Facility-Wide Emission Cap(s) Per Consecutive 12-Month Time Period (Tons)

\*CO = carbon monoxide, CO<sub>2</sub> = carbon dioxide, NO<sub>x</sub> = nitrogen oxides, SO<sub>2</sub> = sulfur dioxide, VOC = volatile organic compound  
HAP = hazardous air pollutant, PM = particulate matter, specify if "Other"



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**B. Equipment Description**

Note that per 310 CMR 7.02, MassDEP can issue a Plan Approval only for proposed Emission Unit(s) with air contaminant emissions that are representative of Best Available Control Technology (BACT). See Section D: Best Available Control Technology (BACT) Emissions and the MassDEP BACT Guidance.

1. Is this proposed project modifying previously approved equipment? ☐ Yes ☐ No

If Yes, list pertinent Plan Approval(s):

2. Is this proposed project replacing previously approved equipment? ☐ Yes ☐ No

If Yes, list pertinent Plan Approval(s):

3. Provide a description of the proposed project, including relevant parameters (including but not limited to operating temperature and pressure) and associated air pollution controls, if any:

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4. Complete the table(s) below to summarize the details of the proposed project.

**Table 2**

Facility- Assigned Identifying Number for Proposed Equipment (Emission Unit No.)	Description of Proposed Equipment Including Manufacturer & Model Number or Equivalent (e.g. Acme Boiler, Model No. XY700)	Manufacturer's Maximum Heat Input Rating in Btu/hr	Proposed Primary Fuel	Proposed Back-Up Fuel (if Any)	Type of Burner (e.g., Low NOx, Ultra-Low NOx)	Is the Emission Unit equipped with flue gas recirculation? (If Yes, provide percent of recirculation)
						<input type="checkbox"/> Yes <input type="checkbox"/> No %
						<input type="checkbox"/> Yes <input type="checkbox"/> No %
						<input type="checkbox"/> Yes <input type="checkbox"/> No %
						<input type="checkbox"/> Yes <input type="checkbox"/> No %
						<input type="checkbox"/> Yes <input type="checkbox"/> No %
						<input type="checkbox"/> Yes <input type="checkbox"/> No %
						<input type="checkbox"/> Yes <input type="checkbox"/> No %
						<input type="checkbox"/> Yes <input type="checkbox"/> No %

**Note:** The following fuel options will, in part, enable your proposed project to comply with Best Available Control Technology (BACT):

- Solely Natural Gas when available as an uninterrupted supply.
- Solely Ultra Low Sulfur Distillate Fuel Oil (ULSD) with a maximum sulfur content of 0.0015% by weight when Natural Gas is unavailable.
- Natural Gas as a primary fuel, plus ULSD as a back-up fuel when the supply of Natural Gas may be interrupted.



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**C. Stack Description**

Complete the table below to summarize the details of the proposed project's stack configuration.

**Note:** Discharge must meet Good Air Pollution Control Engineering Practice. When designing stacks, special consideration must be given to nearby structures and terrain to prevent emissions downwash and adverse impacts upon sensitive receptors. Stack must be vertical, must not impede vertical exhaust gas flow, and must be a minimum of 10 feet above rooftop or fresh air intake, whichever is higher. For additional guidance, refer to the MassDEP "Stack Design General Guidelines."

Table 3						
Emission Unit No.	Stack Height Above Ground (Feet)	Stack Height Above Roof (Feet)	Stack Exit Diameter or Dimensions (Feet)	Exhaust Gas Exit Temperature Range (Degrees Fahrenheit)	Exhaust Gas Exit Velocity Range (Feet per Second)	Stack Liner Material

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**D. Best Available Control Technology (BACT) Emissions**

Complete the table(s) below to summarize the proposed project's BACT emissions.

**Note:** Complete a separate table for each proposed fuel to be used in each Emission Unit. For example, if one Emission Unit will be capable of burning two fuels, you will need to complete two tables.

Table 4A						
Emission Unit No. & Fuel Used	Air Contaminant	BACT Emission Limitation in Pounds per Million Btu <sup>5</sup>	Potential Consecutive 12-Month Time Period Emissions at Manufacturer's Maximum Capacity (Uncontrolled Tons)	Proposed Consecutive 12-Month Time Period Emissions Restriction (Tons) <sup>6</sup>	Proposed Monthly Emissions Restriction (Tons) <sup>6</sup>	Proposed Fuel Usage Limit (if Any) <sup>6</sup>
Unit No.  Fuel Used:	PM <sup>1</sup>					
	NO <sub>x</sub> <sup>2</sup>					
	CO					
	VOC					
	SO <sub>2</sub>					
	HAPs <sup>3</sup>					
	CO <sub>2</sub> <sup>4</sup>					

<sup>1</sup>PM includes particulate matter having a diameter of 10 microns or less (PM<sub>10</sub>) and particulate matter having a diameter of 2.5 microns or less (PM<sub>2.5</sub>).

<sup>2</sup>NO<sub>x</sub> emissions from this proposed project need to be included for the purposes of NO<sub>x</sub> emissions tracking for 310 CMR 7.00: Appendix A, if applicable.

<sup>3</sup>Operating Permit facilities are required to track emissions of Hazardous Air Pollutants.

<sup>4</sup>Pounds of CO<sub>2</sub> per unit product (e.g. pounds CO<sub>2</sub> per megawatt, pounds CO<sub>2</sub> per 1,000 pounds of steam).

<sup>5</sup>Top-Case BACT emission limitations in pounds per million British Thermal Units (BTUs) can be no less stringent than those contained in the applicable sections of 310 CMR 7.26.

<sup>6</sup>Enter "N/A" if not requesting emissions restrictions and/or fuel usage limit.

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**D. Best Available Control Technology (BACT) Emissions** (continued)

Table 4B						
Emission Unit No. & Fuel Used	Air Contaminant	BACT Emission Limitation in Pounds per Million Btu <sup>5</sup>	Potential Consecutive 12-Month Time Period Emissions at Manufacturer's Maximum Capacity (Uncontrolled Tons)	Proposed Consecutive 12-Month Time Period Emissions Restriction (Tons) <sup>6</sup>	Proposed Monthly Emissions Restriction (Tons) <sup>6</sup>	Proposed Fuel Usage Limit (if Any) <sup>6</sup>
Unit No.  Fuel Used:	PM <sup>1</sup>					
	NO <sub>x</sub> <sup>2</sup>					
	CO					
	VOC					
	SO <sub>2</sub>					
	HAPs <sup>3</sup>					
	CO <sub>2</sub> <sup>4</sup>					

**Note:** If you are proposing more than three combinations of Emission Unit(s) and Fuel(s), complete additional copies of these tables.

Table 4C						
Emission Unit No. & Fuel Used	Air Contaminant	BACT Emission Limitation in Pounds per Million Btu <sup>5</sup>	Potential Consecutive 12-Month Time Period Emissions at Manufacturer's Maximum Capacity (Uncontrolled Tons)	Proposed Consecutive 12-Month Time Period Emissions Restriction (Tons) <sup>6</sup>	Proposed Monthly Emissions Restriction (Tons) <sup>6</sup>	Proposed Fuel Usage Limit (if Any) <sup>6</sup>
Unit No.  Fuel Used:	PM <sup>1</sup>					
	NO <sub>x</sub> <sup>2</sup>					
	CO					
	VOC					
	SO <sub>2</sub>					
	HAPs <sup>3</sup>					
	CO <sub>2</sub> <sup>4</sup>					



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**E. Monitoring Procedures**

Complete the table below to summarize the details of the proposed project's monitoring procedures.

Table 5			
Emission Unit No.	Type or Method of Monitoring (e.g. Fuel Flow, O <sub>2</sub> )	Parameter /Emission Monitored	Frequency of Monitoring

**F. Record Keeping Procedures**

Complete the table below to summarize the details of the proposed project's record keeping procedures. Proposed record keeping procedures need to be able to demonstrate your compliance status with regard to all limitations/restrictions proposed herein. Record keeping may include, but is not limited to, hourly or daily logs, meter charts, time logs and fuel purchase receipts.

Table 6			
Emission Unit No.	Parameter (e.g. Fuel)	Record Keeping Procedures (e.g. Data Logger or Manual)	Frequency of Data Record (e.g. Hourly, Daily)

Examples of emissions calculations for record keeping purposes:

NO<sub>x</sub>:  $\{(0.035 \text{ pounds}/10^6 \text{ Btu}) \cdot (\text{X cubic feet}) \cdot (1000 \text{ Btu}/\text{cubic foot}) + (0.15 \text{ pounds}/10^6 \text{ Btu}) \cdot (\text{Y gallons of fuel oil}) \cdot (130,000 \text{ Btu}/\text{gal})\} \cdot 1 \text{ ton}/2000 \text{ pounds} = \text{NO}_x \text{ in tons per consecutive twelve month time period}$

CO:  $\{(0.08 \text{ pounds}/10^6 \text{ Btu}) \cdot (\text{X cubic feet}) \cdot (1000 \text{ Btu}/\text{cubic foot}) + (0.08 \text{ pounds}/10^6 \text{ Btu}) \cdot (\text{Y gallons of fuel oil}) \cdot (130,000 \text{ Btu}/\text{gal})\} \cdot 1 \text{ ton}/2000 \text{ pounds} = \text{CO in tons per consecutive twelve month time period}$

VOC:  $\{(0.03 \text{ pounds}/10^6 \text{ Btu}) \cdot (\text{X cubic feet}) \cdot (1000 \text{ Btu}/\text{cubic foot}) + (0.03 \text{ pounds}/10^6 \text{ Btu}) \cdot (\text{Y gallons of fuel oil}) \cdot (130,000 \text{ Btu}/\text{gal})\} \cdot 1 \text{ ton}/2000 \text{ pounds} = \text{VOC in tons per consecutive twelve month time period}$

SO<sub>2</sub>:  $\{(0.0015 \text{ pounds}/10^6 \text{ Btu}) \cdot (\text{Y gallons of fuel oil}) \cdot (130,000 \text{ Btu per gallon})\} \cdot 1 \text{ ton}/2000 \text{ pounds} = \text{SO}_2 \text{ in tons per consecutive twelve month time period}$

Note: X = cubic feet of natural gas burned and Y = gallons of ULSD oil burned (per consecutive twelve-month time period)

**Note:** These numbers cannot exceed the emissions restrictions proposed in Tables 4a, 4b, 4c above.



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**G. Additional Information Checklist**

Attach a specific facility description and the following required additional information that MassDEP needs to process your application. Check the box next to each item to ensure that your application is complete.

- ☐ Plot Plan
- ☐ Combustion Equipment Manufacturer Specifications, Including but not Limited to Emissions Data
- ☐ Combustion Equipment Standard Operating Procedures
- ☐ Combustion Equipment Standard Maintenance Procedures, Including Cleaning Method & Frequency
- ☐ Calculations to Support This Plan Application
- ☐ BWP AQ BACT Form, if not proposing Top-Case BACT
- ☐ Air quality dispersion modeling demonstration documenting that National Ambient Air Quality Standards (NAAQS) are not exceeded.

**H. Other Regulatory Considerations**

Indicate below whether the proposed project is subject to any additional regulatory requirements.

310 CMR 7.00: Appendix A Nonattainment Review, or is netting used to avoid review ☐ Yes ☐ No  
under 310 CMR 7.00 Appendix A or 40 CFR 52.21?

40 CFR 60: New Source Performance Standards (NSPS)? ☐ Yes ☐ No

If Yes: Which subpart? Applicable emission limitation(s):

40 CFR 61: National Emission Standards for Hazardous Air Pollutants (NESHAPS) ☐ Yes ☐ No

If Yes: Which subpart? Applicable emission limitation(s):

40 CFR 63: NESHAPS for Source Categories – Maximum Achievable (MACT) or Generally Available (GACT) Control Technology ☐ Yes ☐ No

If Yes: Which subpart? Applicable emission limitation(s):

301 CMR 11.00: Massachusetts Environmental Policy Act (MEPA)? ☐ Yes ☐ No

If Yes: EOEA No.:

Other Applicable Requirements? ☐ Yes ☐ No

If Yes: Specify:

Facility-Wide Potential-to-Emit Hazardous Air Pollutants (HAPS): ☐ Major\* ☐ Non-Major

\*A Major source has a facility-wide potential-to-emit of 25 tons per year or more of the sum of all hazardous air pollutants or 10 tons per year or more of any individual hazardous air pollutant.



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**I. Certification by Responsible Official**

The signature below provides the affirmative demonstration pursuant to 310 CMR 7.02(4)(d)5 that any facility(ies) in Massachusetts, owned or operated by the proponent for this project (or by an entity controlling, controlled by or under common control with such proponent) that is subject to 310 CMR 7.00, et seq., is in compliance with, or on a MassDEP approved compliance schedule to meet, all provisions of 310 CMR 7.00, et seq., and any plan approval, order, notice of noncompliance or permit issued thereunder. This Form must be signed by a Responsible Official working at the location of the proposed new or modified facility. Even if an agent has been designated to fill out this Form, the Responsible Official must sign it. (Refer to the definition given in 310 CMR 7.00.)

**I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment.**

\_\_\_\_\_  
Responsible Official Name (Type or Print)

\_\_\_\_\_  
Responsible Official Signature

\_\_\_\_\_  
Responsible Official Title

\_\_\_\_\_  
Responsible Official Company/Organization Name

\_\_\_\_\_  
Date (MM/DD/YYYY)

This Space Reserved for  
MassDEP Approval Stamp.

**Continue to Energy Efficiency Evaluation Survey ►**





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**J. Energy Efficiency Evaluation Survey**

1. Do you know where your electricity and/or fuel and/or water and/or heat and/or compressed air is being used/consumed? ☐ Yes ☐ No
2. Has your facility had an energy audit performed by your utility supplier (or other) in the past two years?<sup>1</sup> ☐ Yes ☐ No
  - a. Did the audit include evaluations for heat loss, lighting load, cooling requirements and compressor usage? ☐ Yes ☐ No
  - b. Did the audit influence how this project is configured? ☐ Yes ☐ No
3. Does your facility have an energy management plan? ☐ Yes ☐ No
  - a. Have you identified and prioritized energy conservation opportunities? ☐ Yes ☐ No
  - b. Have you identified opportunities to improve operating and maintenance procedures by employing an energy management plan? ☐ Yes ☐ No
4. Has each emission unit proposed herein been evaluated for energy consumption including average and peak electrical use; efficiency of electric motors and suitability of alternative motors such as variable speed; added heat load and/or added cooling load as a result of the operation of the proposed process; added energy load due to building air exchange requirements as a result of exhausting heat or emissions to the ambient air; and/or use of compressors? ☐ Yes ☐ No
5. Has your facility considered alternative energy methods such as solar, geothermal or wind power as a means of supplementing all or some of the facility's energy demand? ☐ Yes ☐ No
6. Does your facility comply with Leadership in Energy & Environmental Design (LEED) Green Building Rating System design recommendations?<sup>2</sup> ☐ Yes ☐ No

<sup>1</sup>A facility wide energy audit would include an inspection of such things as lighting, air-conditioning, heating, compressors and other energy-demand equipment. It would also provide you with information on qualifying equipment rebates and incentive programs; analysis of your energy consumption patterns and written cost-savings recommendations and estimated cost savings for installing new, high-efficiency equipment.

<sup>2</sup>To understand the LEED Rating System, it is important to become familiar with its comprising facets. To be considered for LEED New Construction and Major Renovations, a building must meet specific prerequisites and additional credit areas within six categories:

- Sustainable Sites
- Materials and Resources
- Water Efficiency
- Indoor Environmental Quality
- Energy and Atmosphere
- Innovation and Design